

ABSTRACT

A variable capacitor of the invention includes a beam having flexibility and an electrode provided close to the beam in order to form a capacitor with the beam. By applying a voltage to between the beam and the electrode to thereby deflect the beam by an electrostatic force, a capacitance between the both is changed. The deflected beam and the electrode are placed into contact through an insulation layer formed on a surface of at least one thereof, to change a contact area thereof, thereby changing the capacitance. Meanwhile, the electrode is divided in plurality. A recess is formed such that one electrode is lower than a height of another electrode surface. By applying a voltage to the beam and the electrode corresponding to the recess, the beam is pulled to an inside of the recess, thereby enabling to eliminate stiction.